PATENT
LOREAL 3.0-002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of :
Bertrand Lion :
: Group Art Unit: 1618
Application No. 10/735,156 :
: Examiner: J.W. Rogers
Filed: December 12, 2003 :
:
For: DISPERSIONS OF POLYMERS :
IN ORGANIC MEDIUM, AND :
COMPOSITIONS COMPRISING
THEM :
X

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**DECLARATION OF BERTRAND LION UNDER 37 C.F.R. §1.132**

Sir:

I, Bertrand Lion, hereby declare as follows:

1. I am the inventor of the captioned patent application.

2. I have reviewed the Office Action dated October 23, 2007.

3. I understand the position taken by the Examiner with respect to patentability of my claimed invention, particularly his view that claims 1, 3-4, 10-12, and 15-22 would be obvious in view of WO 97/33556 ("Midha").

4. The purpose of this Declaration is to present additional work that was conducted under my general supervision.

5. The invention claimed in my patent application is a polymer dispersion in a non-aqueous non-silicone organic medium comprising a polymer having a skeleton insoluble in the

medium and side-chains grafted to the skeleton which are soluble in the medium. The amount of side-chain grafts ranges from about 0,05% to about 20% by weight of the polymer.

6. Unlike my invention, Midha discloses polymer solutions and not dispersions. Midha specifically discloses polymers having between 5% and 70% side-chain grafts, most preferably between 20% and 50% side-chain grafts.

7. Experiments were carried out as follows: three graft copolymers were synthesized, each obtained by polymerization of a) methacrylate monomers, with b) a polyethylene/polybutylene copolymer (hereafter "macromonomer"). The methacrylate monomers formed the backbone of the graft copolymer while the macromonomers formed the side-chain grafts. Each copolymer differed only in the amount of macromonomer side-chain grafts introduced into the copolymer, as shown in Table I below.

**TABLE I : Polymers containing varying amounts of macromonomer**

| **Polymer** | **Amount of macromonomer (by weight of copolymer)** |
|---|---|
| Polymer 1 (claimed invention) | 6% |
| Polymer 2 (comparative) | 25% |
| Polymer 3 (comparative) | 30% |

8. A dispersion or solution of copolymer was formed by mixing each copolymer with 20% by weight of isododecane as in Table I.

9. Then 0.5 mL of each of the dispersion or the solution were spread over a glass plate (of approximately 2.5cm by 7.5cm) and let dry at ambient temperature (25°C) for about 24 hours to form a film of polymer. Then 1 mL of olive oil was spread over each of the films of polymer. After 0 minutes, (i.e. immediately after application), 30 minutes, 1 hour and 3 hours, the excess olive oil was wiped off each of the films and the tackiness of the films were estimated by touch (with a finger). The results were as follows :

**TABLE II**

| **Tackiness at Time Intervals** | **Polymer 1 (claimed invention)** | **Polymer 2 (comparative)** | **Polymer 3 (comparative)** |
|---|---|---|---|
| 0 minutes (immediately after application of the olive oil to the polymer film) | Not sticky | Very sticky | Very sticky |
| 30 minutes | Not sticky | Very sticky | Very sticky |
| 1 hour | Not sticky | Very sticky | Very sticky |
| 3 hours | Not sticky | Very sticky | Polymer film dissolved in the oil |

10. The evaluated "tackiness" quality was a surrogate for the staying or holding power of a particular copolymer to the skin. The tackier or stickier the polymer was in the presence of olive oil, the more sensitive the film was to oil and, thus the greater the chance that the polymer film would be altered by oil or sebum in/on the skin.

11. The results indicated that the polymer dispersion formed according to the claimed invention (polymer 1 - containing only 6% macromonomer) was much less tacky than the polymer solution or dispersion (polymers 2 and 3) each containing more than 20% macromonomer. As such, polymer 1 had better staying or holding power as compared with polymers 2 and 3 when subjected to oil.

12. In my opinion, the claimed invention achieved superior results that would not have been expected by a person skilled in the art. Limiting the amount of grafted macromonomer to between 0,05% to 20%, as in the claimed invention, results in a polymer dispersion having improved staying or holding powers when applied to the skin.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Dated: 2008 04 15

Bertrand Lion
BERTRAND LION